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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,766	09/24/2003	Glynn R. Williams	101.0015	4379
35204	7590	06/21/2005	EXAMINER	
SCHLUMBERGER RESERVOIR COMPLETIONS			SMITH, MATTHEW J	
14910 AIRLINE ROAD			ART UNIT	
ROSHARON, TX 77583			PAPER NUMBER	
			3672	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,766

Applicant(s)

WILLIAMS, GLYNN R.

Examiner

Matthew J. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9-11 and 15-50 is/are rejected.
- 7) ☒ Claim(s) 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24Sep03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "39", injection port.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-11 and 15-50 are rejected under 35 U.S.C. 103(a) as being obvious over Tubel et al. (6281489) in view of Pringle (6070608).

Tubel et al. discloses, in Figure 15, an optical fiber 944 extending into a wellbore, the optical fiber adapted to transmit light at varying intensities; a tubing, gas lift, or fluid valve 930 having at least one setting between an open and a closed position; the optical fiber (col. 20, line 15) functionally connected to the valve; a photovoltaic converter 960 for receiving the light and for converting the light into motive power for the variable orifice; a control unit 942 functionally connected to the optical fiber to transmit light through the optical fiber and to the gas lift valve; a monitoring unit 927 operative to measure pressure, temperature (col. 20, line 5) or flow (col. 19, line 62) at one location within the wellbore; the control unit functionally connected to the monitoring unit and to the gas lift valve, wherein the gas lift valve is activated and controlled by the control unit depending on output received from the monitoring unit; a laser light source 940 to transmit the light through the optical fiber; tubing 906; corrosion preventative fluid, flushing fluid, and a diluent fluid (col. 18, lines 25-26); the control unit functionally connected to an injection plant 726 that injects the additional fluid into the tubing and wherein the control unit controls the conditions under which the additional fluid is injected into the tubing; and the tubing valve is placed between a production tubing and a production liner.

This reference also discloses a method for controlling the flow of fluid in a wellbore, comprising: influencing the flow of fluid in a wellbore by deploying a gas lift valve in the wellbore; functionally connecting the gas lift valve and a control unit to an optical fiber; transmitting light from the control unit through the optical fiber and to the gas lift valve; measuring pressure, temperature and flow rate with a monitoring unit at

one or more locations within the wellbore; transmitting output from the monitoring unit to the control unit; and activating and controlling the gas lift valve depending on the output received by the control unit from the monitoring unit and in response to the light transmitted by the control unit through the fiber; receiving the light in a photovoltaic converter and converting the light into motive power for the gas lift valve; monitoring pressure; controlling the injection of an additional fluid into a tubing by use of the gas lift valve; injecting additional fluid or gas into the tubing aids in extracting the fluid from the wellbore; a corrosion preventative, a flushing fluid, or a diluent fluid; functionally connecting the control unit to an injection plant 726 that injects the additional fluid into the tubing and controlling the conditions under which the additional fluid is injected into the tubing by use of the control unit; controlling the conditions under which the additional fluid is injected into the tubing depending on output received by the control unit from the monitoring unit; deploying the at least one tubing valve between a production tubing and a production liner; and functionally connecting the at least one tubing valve to the control unit via an optical fiber.

Tubel et al does not disclose a variable orifice valve having a plurality of settings between an open and a closed position; the control unit functionally connected to the monitoring unit through an additional optical fiber; a plurality of gas lift valves deployed in the wellbore adapted to influence the flow of fluid in the wellbore; a control unit functionally connected to the gas lift valves through at least one optical fiber and adapted to transmit light through the at least one optical fiber and to the gas lift valves; the gas lift valves being activated and controlled by the light transmitted through the

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fiber; the control unit functionally connected to the monitoring unit and to the gas lift valves; the gas lift valves activated and controlled by the control unit depending on output received from the monitoring unit; a plurality of monitoring units; each monitoring unit functionally connected to the control unit; the gas lift valves activated and controlled by the control unit depending on output from received from the monitoring units; deploying a plurality of gas lift valves in the wellbore adapted to influence the flow of fluid in the wellbore; functionally connecting the control unit to the gas lift valves through at least one optical fiber; transmitting light from the control unit through the at least one optical fiber and to the gas lift valves; activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring unit and in response to the light transmitted by the control unit through the fiber; functionally connecting a plurality of monitoring units to the control unit; activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring units and in response to the light transmitted by the control unit through the fiber; functionally connecting at least one tubing valve to the control unit; or activating the at least one tubing valve depending on output from the monitoring unit.

Pringle shows a variable orifice valve 8 having a plurality of settings between an open and a closed position.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a variable orifice gas lift valve in the Tubel et al. system,

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as suggested by Tubel et al. (fluid valve), in order to create high flow rates (Pringle, abstract, line 2).

It would have been further obvious to a person having ordinary skill in the art at the time the invention was made to functionally connect to the monitoring unit through an additional optical fibers; the control unit controls the conditions under which the additional fluid is injected into the tubing depending on output received from the monitoring unit; a plurality of gas lift valves deployed in the wellbore adapted to influence the flow of fluid in the wellbore; a control unit functionally connected to the gas lift valves through one optical fiber and adapted to transmit light through the one optical fiber and to the gas lift valves; the gas lift valves being activated and controlled by the light transmitted through the fiber; the control unit functionally connected to the monitoring unit and to the gas lift valves, wherein the gas lift valves are activated and controlled by the control unit depending on output received from the monitoring unit; a plurality of monitoring units; each monitoring unit functionally connected to the control unit; and wherein the gas lift valves are activated and controlled by the control unit depending on output from received from the monitoring units; deploying a plurality of gas lift valves in the wellbore adapted to influence the flow of fluid in the wellbore; functionally connecting the control unit to the gas lift valves through at least one optical fiber; transmitting light from the control unit through the at least one optical fiber and to the gas lift valves; activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring unit and in response to the light transmitted by the control unit through the fiber; functionally connecting a plurality of

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monitoring units to the control unit; activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring units and in response to the light transmitted by the control unit through the fiber; functionally connecting at least one tubing valve to the control unit; and activating the at least one tubing valve depending on output from the monitoring unit since it well known to duplicate parts or components to increase speed, efficacy, and efficiency.

### ***Allowable Subject Matter***

Claims 1-8 are allowed.

Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maron et al. (5892860) present a fiber optic system for a well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 9-4.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

MJS *MJS*  
13 May 2005